

REMARKS

In accordance with the foregoing, claims 1-4, 6 and 7 are amended. Claim 5 is cancelled without prejudice. No new matter is added. Claims 1-4, 6, and 7 are pending and under consideration.

OBJECTION TO TITLE AND FIGURE 7

The informality noted relative to FIG. 7 is corrected herewith.

The title is amended according to the Examiner's suggestion.

CLAIM REJECTION UNDER 35 U.S.C. §103

Claims 1-5 are rejected under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent No. 6,344,906 to Gatto et al. (hereinafter "Gatto") in view of U.S. Patent No. 5,848,192 to Smith et al. ("Smith").

Gatto discloses a conventional duplex scanner in which two linear sensors (see FIG. 5 of Gatto) read both a front and a rear surface of a document (see col. 7, lines 7-20 of Gatto).

Smith discloses a processor that inserts a restart marker after compressing a row of blocks (see col. 13, lines 46-50 of Smith).

The pending claims are amended herewith to enhance form and clarity. No new matter is added. The claims amendments are fully supported by the originally filed specification, for example, FIGS. 2, 6 and 7 with their corresponding descriptions.

Independent claim 1, patentably distinguishes over the cited prior art at least by reciting

- a single image memory storing image data in a single image;
- a first image input unit [...] writing the first image data into the single image according to a predetermined order
- a second image input unit [...] writing the second image data into the single image according to the predetermined order
- wherein writing the first and second image data into the single image according to the predetermined order corresponding to the predetermined distance includes writing the first image data read prior to reading the second image data for a number of block rows corresponding to the predetermined distance, by the first image input unit, and then, writing alternately block rows of the first and second image data into the

single image memory, by the first and second image input unit, and then, writing block rows of the second image data, for the number of block rows corresponding to the predetermined distance, into the single image memory, by the second image input unit.

None of the cited references teach or suggest reading and storing image data in a single image in the manner specified by claim 1, wherein the predetermined order of the data in the single image corresponds to the predetermined distance between the image readers. Due to the features recited in the claims the front and rear image data of a document are stored and compressed in a single image, while read in parallel.

Since none of the cited references teach or suggest the above-identified features recited in independent claim 1, claim 1 and claims 2-4 are patentable over the cited prior art.

Claims 6 and 7 are rejected under 35 U.S.C. §103 as allegedly being unpatentable over Gatto and Smith in further view of U.S. Patent No. 6,549,663 to Yokose et al. ("Yokose").

Yokose does not correct or compensate for Gattos and Smith's failure in anticipating or rendering obvious all the features recited in the claims.

Amended independent claim 6 patentably distinguishes over the cited prior art references at least by reciting:

- wherein the image data comprises first and second image data, the first image data being an image of one of a front and rear surface of an original document, being read by a first image reader provided in a first image input unit, and being written into the image file according to a predetermined order, the second image data being an image of the other of the front and rear surface of the original document, being read by a second image reader provided in a second image input unit, in parallel with reading the first image data, and the second image reader being positioned spaced from the first image reader by a predetermined distance in a sub-scanning direction, and the second image data being written into the image file according to the predetermined order
- wherein writing the first and second image data into the image file according to the predetermined order corresponding to the predetermined distance includes writing the first image data read prior to reading the second image data for a number of block rows corresponding to the predetermined distance, by the first image input unit, and then, writing alternately block rows of the first and second image data into the

image file, by the first and second image input unit, and then, writing block rows of the second image data, for the number of block rows corresponding to the predetermined distance, into the image file, by the second image input unit,

- wherein the identifier is inserted after a final block of a predetermined number of blocks in a block row, all blocks in a block row representing the same one of the first and second image data,
- wherein the image processing control unit separates the image-compressed image data according to the identifiers included in the image-compressed image data to regard the separated image-compressed image data as the first and second image data according to the predetermined order corresponding to the predetermined distance, and sends the first and second image data to the image expansion unit.

Amended independent claim 7 patentably distinguishes over the cited prior art references at least by reciting:

- storing image data in a single image;
- writing the first image data which is an image of one of a front and rear surface of an original document, into the single image according to a predetermined order;
- reading second image data in parallel with reading the first image data, by a second image reader provided in a second image input unit and positioned spaced from the first image reader by a predetermined distance in a sub-scanning direction, and writing the second image data which is an image of the other of the front and rear surface of the original document, into the single image according to the predetermined order;
- carrying out compression processing on the first and second image data read out by the image read unit,
- inserting an identifier after a final block of each block row;
- separating the image-compressed image data to the first and second image data according to the identifiers included in the image-compressed image data
- wherein writing the first and second image data into the single image according to the predetermined order corresponding to the predetermined distance includes writing the first image data read prior to reading the second image data for a number of block rows corresponding to the predetermined distance by the first image input unit, and then, writing block rows of the first and second image data alternately into the single image by the first and second image input unit, and then, writing the second

image data, for the number of block rows corresponding to the predetermined distance, into the single image, by the second image input unit.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

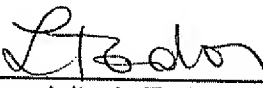
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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